

SECRET

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Table I
Absorbance (in Percent) for Various Materials
at Various Wavelengths of Light

Laser Type	XeCl Excimer	Nd:YAG	CO ₂
Wavelength	308 nm	1.06 μm	10.6 μm
<i>Metals</i>			
Silver (Ag)	90%	2-3%	1%
Gold (Au)	62%	2-3%	1%
Copper (Cu)	75%	10%	2%
Platinum (Pt)	60%	20%	4%
Palladium (Pd)	58%	26%	4%
<i>Metal Oxides</i>			
Silica (SiO ₂)	2-90%	2-4%	>90%
Titania (TiO ₂)	>90%	30%	>90%
Alumina (Al ₂ O ₃)	85%	1-10%	90%

Table II
Material Properties for RTP Simulation

Material	Conductivity (W/m-K)	Specific Heat (J/kg-K)	Density
Aerogel	10.0	981	221
Silver	$f_1(T)$	235	10,500
Silicon	$f_2(T)$	702	2,330

where

$$f_1(T) = 425 + 0.07T - 0.0002T^2 + 1.03 \times 10^{-7}T^3 + 1.03 \times 10^{-11}T^4 - 1.72 \times 10^{-14}T^5$$

and;

$$f_2(T) = 445 - 1.65T + 0.0028T^2 - 2.4 \times 10^{-6}T^3 + 1.0 \times 10^{-9}T^4 - 1.37 \times 10^{-13}T^5$$